



# AGAINST THE WIND:

## PROTECTING YOUR HOME AND FAMILY FROM HURRICANES

*Hurricanes are tropical storms with winds reaching a constant speed of at least 74 miles per hour. Hurricanes bring dangerously high winds, storm surge, flooding and, occasionally, tornadoes. Residents of hurricane-vulnerable states must take action before the storm to strengthen their home, compile emergency supplies and be ready to react. Don't get caught unprepared!*



### Surviving the Storm: Protecting Your Home From Hurricanes

Experts who studied the effects of Hurricane Andrew found that the way wind velocity blows through four places in a home – doors, windows, roof and garages – determines its vulnerability. If you take action NOW, before a hurricane strikes, you increase the odds that your home will survive the storm.

### Areas to Strengthen

**The Roof:** Gabled roofs need additional truss bracing to make your roof system stronger. Truss bracing consists of 2x4s running the length of your roof and gable end bracing consists of 2x4s in an X pattern. Learn more about protective measures from your local home improvement store. Hurricane straps can also keep your roof attached to your walls, but may be difficult for homeowners to install. Consult a professional.

**Exterior Doors:** Most double entry doors have an active and inactive (or fixed) door. Check to see if the fixed door is secure enough. Some door manufacturers provide reinforcing bolt kits or you can buy and install door bolt materials. Check with your local home improvement store.



**Windows:** There are many types of manufactured storm shutters or you can make your own plywood shutters. Check with your local home improvement store and call your local building official to determine if a permit is required. And remember to cover all exposed windows and glass – even French doors and skylights. Plywood shutters should be made of 5/8 inch exterior plywood and installed using bolts and masonry anchors.



**Garage Doors:** Double-wide (two car) garage doors pose a problem because they wobble in high winds and can blow out of their tracks or collapse. Some garage doors can be strengthened with retrofit kits. Some garage doors can be reinforced by installing horizontal bracing on each panel. You may also need heavier hinges and stronger center supports. Also, check the strength of your garage door track. Consult your local home improvement store or the manufacturer of your garage door.

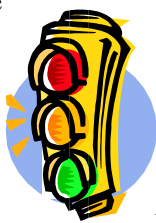
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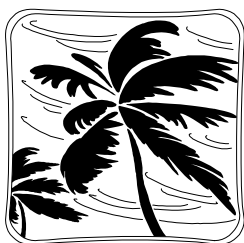
Project Impact is a FEMA initiative helping communities become more disaster resistant. Your community can become a disaster-resistant community. Learn more on the FEMA Internet site, at [www.fema.gov](http://www.fema.gov) or call 1-800-480-2520 and ask for the Project Impact packet.

## A Hurricane Watch is like a flashing yellow traffic light, but a Hurricane Warning is a red light!

**Hurricane Watch:** A hurricane is a threat. Be prepared to act quickly. You should: listen to news reports, fuel car, bring in outdoor furniture, toys and tools, remove outside antennas, board-up windows, turn refrigerator and freezer to coldest setting, store drinking water in clean bathtubs, jugs, bottles and cooking utensils, review evacuation plan.



**Hurricane Warning:** A hurricane is expected within 24 hours. Get ready to take action now! You should: listen to news reports, store valuables and personal papers in a waterproof container. You may want to move furniture to upper levels of the house if you are in a storm surge area. Turn off utilities. If you are in a mobile home, check tiedowns and leave immediately.



### What to do during a hurricane . . .

Remain indoors. Wind, downed live power lines and falling or flying trees and debris pose serious danger.

Stay on the side of the house opposite the direction the wind is coming. As the wind shifts, move to a room on the opposite side. If you have a room within a room, such as a bathroom, stay there during the height of the hurricane. Keep away from windows and glass doors.

Don't go out during the calm as the eye of the hurricane passes overhead. The wind may stop for several minutes, or even an hour or more, but this is only the mid-point of the hurricane. The lull will end suddenly as the wind strikes from the opposite direction -- often stronger than before.

If the roof blows off or the house shows signs of collapsing, take cover in a room within a room, such as a bathroom, or under the stairway, strong table or door frame.

Remain calm!



*If you must evacuate: Leave as soon as possible as evacuation routes can become snarled. Watch for flooded roads and washed out bridges. Know alternate evacuation routes that you can use, if necessary. Tell someone outside of the storm area where you are going. Bring pre-assembled emergency supplies, clothing, blankets and sleeping bags. It's best to bring pets with you as leaving them behind is dangerous, but remember that most shelters won't allow animals. Lock up the house!*

### Emergency Supplies

Keep enough supplies in your home to meet your needs for three days. Store your disaster supplies in an easy-to-carry container such as a backpack or duffle bag or covered trash container. Include:

- ☞ A three-day supply of water and food that won't spoil;
- ☞ One change of clothing and footwear per person and one blanket or sleeping bag per person;
- ☞ A first aid kit with family prescription medicines;
- ☞ Emergency tools such as a battery-powered radio, flashlight and extra batteries;
- ☞ An extra set of car keys and a credit card, cash and traveler's checks;
- ☞ Sanitation supplies;
- ☞ Special items for the elderly or infant family members;
- ☞ An extra pair of glasses.

### Clear Debris, Secure Outdoor Items



*Airborne Missiles? The wind can send ordinary objects -- trees, storage sheds, barbecue grills -- hurtling through the air at high speeds, posing a danger to people and buildings. Anchor securely or bring items indoors. Also clear debris away from your house before a hurricane comes.*